

Cancer Dependency Map (DepMap) CRISPR data analysis

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 An abbreviated version of this protocol was published in Science in Sep 2021

The adaptive immune system is a major driver of selection for tumor suppressor gene inactivation

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Detailed protocol

CERES scores from the DepMap were downloaded from the DepMap website (20Q4): <https://depmap.org/portal/download/>

Genes were classified as either oncogenes (OGs), tumor suppressors (TSGs), essential genes, or all genes. OGs and TSGs gene lists were derived from TUSON Explorer described by Davoli et al, 2013 Cell PMID: 24183448 Supplemental Tables S4A and S4B. The essential gene list was derived from Hart et al, 2015 Cell PMID: 26627737 Supplemental Table S2 where the gene was essential in at least 3 cell lines. The category named termed all genes contains all genes in the CRISPR library including TSGs, OGs, and essential genes.

The distribution of TSG, OG, and essential gene CERES scores were compared to the all gene category CERES scores using a Mann-Whitney U test in R or Graphpad Prism

How to cite: (Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used)

1. Martin, T. and Elledge, S. (2021). Cancer Dependency Map (DepMap) CRISPR data analysis. Bio-protocol Preprint. bio-protocol.org/dep1405.
2. Martin, T. D., Patel, R. S., Cook, D. R., Choi, M. Y., Patil, A., Liang, A. C., Li, M. Z., Haigis, K. M. and Elledge, S. J. (2021). The adaptive immune system is a major driver of selection for tumor suppressor gene inactivation. Science 373(6561). DOI: [10.1126/science.abg5784](https://doi.org/10.1126/science.abg5784)

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